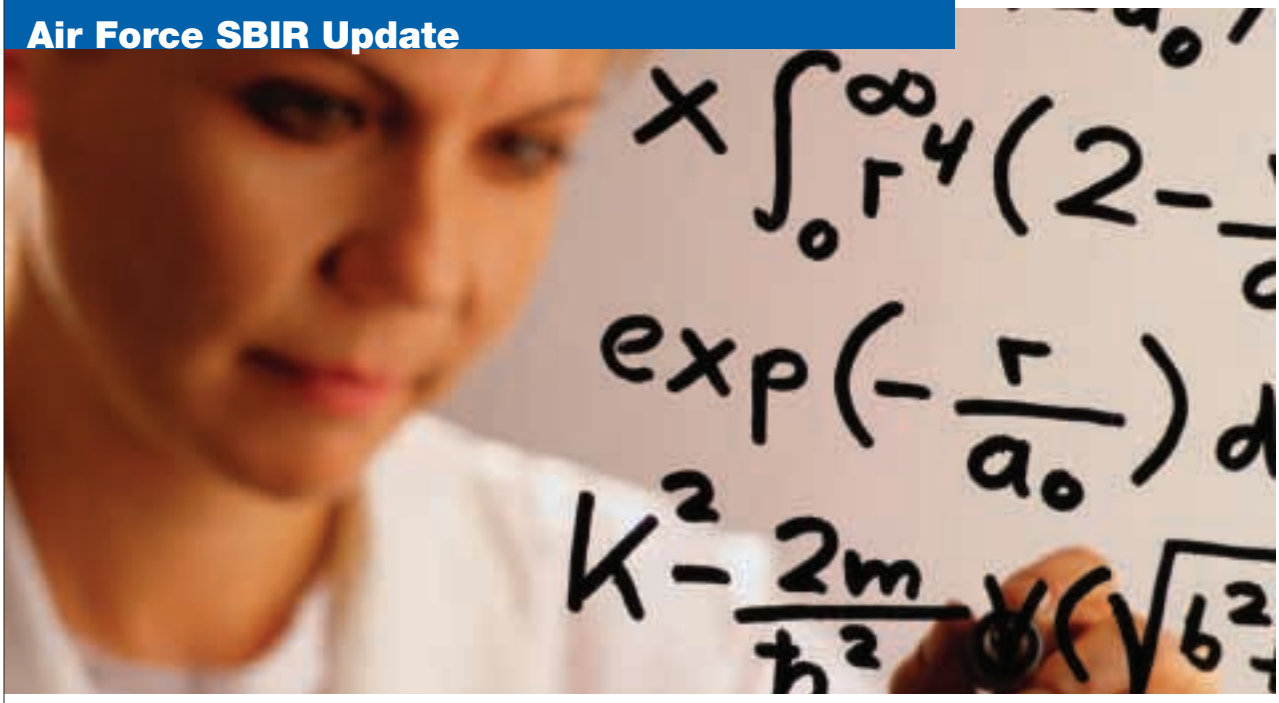
Air Force SBIR Advantage

Offering a brief look at the vital research and development contributions made by the Small Business Innovation Research (SBIR) Program in direct support of the Air Force mission.

1st Quarter 2001

Air Force SBIR Update



Solicitation, Proposal Evaluation and Contract Awards

Stephen Guilfoos
Air Force SBIR
Program Manager

The SBIR acquisition cycle (solicitation, proposal evaluation and contract award) for Phase I is a multi-step process. It begins with the publication of our solicitation, and is followed by receipt of the proposals, the evaluation and ranking of proposals, and concludes with the award of SBIR Phase I contracts.

Solicitation Step

All our approved topics are posted on the DOD SBIR website (http://www.acq.osd.mil/sadbu/sbir) on 1 October each year. From the posting until the last business day in November, the small businesses are encouraged to contact the Air Force technical points of contact (POCs) for those topics to which the small businesses believe their technologies apply. During these pre-proposal discussions, the small businesses can discuss their innovative technical approaches with the Air Force's technical points of contact. The small businesses have until early in January to submit their proposals to the appropriate Air Force organization.

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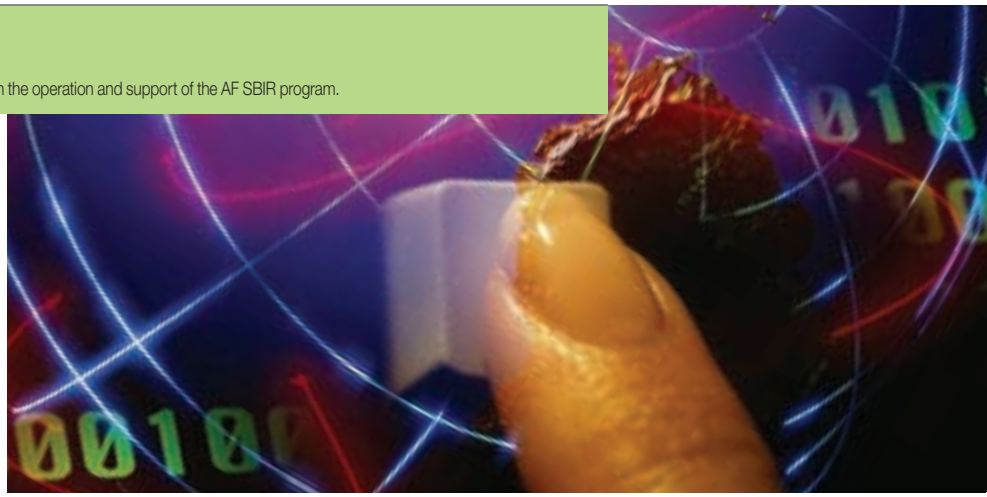
SBIR Tech Issues
Tech Issues is intended for personnel directly involved in the operation and support of the AF SBIR program.



SBIR Topic Suggestion Module

The AF SBIR Program Management Team created the Topic Suggestion Module to streamline the PEO/DAC topic submissions process and reduce the production of paper copies. The module permits on-line submission and editing of the topic by the PEO/DAC POC and the AFRL Technical POC.

These key players use the module to electronically update the editing process without having to continually send paper copies back and forth. This electronic sharing of the same data file allows multiple changes until both parties are happy with the content and the content meets the six DDR & E criteria for the DOD level review. Whenever someone makes an edit change to a topic, the module automatically generates e-mails to all the other parties involved on that topic. At the end of the editing process, the module provides for an electronic "approval" by both the PEO/DAC POC and the AFRL Technical POC.

The module also provides a "view only" capability for all others. This permits the PEO/DAC representatives the ability to look at all the suggested topics, helping them identify potential duplication of topics before too many resources have been expended to accomplish the final writing of the topics.

SBIR/STTR Topic Criteria

Six DDR & E criteria for the DOD level review

1. Topics will solicit R&D and not procurement. (R&D projects involve technical risk.)
2. Topics will fall within one or more of DoD's key technology areas.
3. Topics will allow the performing company "significant flexibility."
4. Topics will include examples of possible Phase III dual-use applications.
5. Topics will not duplicate each other.
6. Topics will be clearly written.

To find more information about topic criteria, RDT&E budget activities and key technology areas go to [www.dodsbir.net/topicreview/files/topcriteria.htm].

The AFSBIR Program Management Team plans on modifying and improving the module based on lessons learned while using the module. All personnel involved with this process are encouraged to send along comments and ideas in order to continually improve the module and internal processes. One suggestion that has already been received involves modifying the module to allow it to archive topic files for all those topics that are not selected for the solicitation (backup topics). We are confident that the module can be made into a more powerful tool. We depend upon your help to make the module a complete editing and management tool.

We look forward to your inputs – send them to the Air Force SBIR Program Management Team at AFRL/XPTT, 1864 4th Street, Suite 1, Wright-Patterson AFB OH 45433. Or you can e-mail us at SBIR-HQ@afrl.af.mil.

SBIR Facts & Figures

AF SBIR and STTR Fast Track Status

The SBIR "Fast Track" policy offers prospective investors a new opportunity to leverage their investments in small technology companies working on R&D projects with defense and commercial applications. Under Fast Track, a small company can offer an investor the opportunity to obtain a match of between one to four dollars in SBIR funds for every one dollar the investor puts in.

Over 70 percent of outside investors are from the private sector.

	Year of Solicitation			
	1997	1998	1999	2000
Number of Fast Tracks	4	3	8	20

AF SBIR Impact

Portable Electrochemical Sensors

Air Force Requirement

As the custodian of millions of acres of land, the Air Force is committed to ensuring that steps are taken to protect the environment. The monitoring of water quality over widely dispersed areas requires portable instruments that offer laboratory-level capabilities and sensitivities. The Air Force's environmental monitoring needs called for instruments that were portable, reliable for outdoor operations, and cost-effective.

SBIR Technology:

Nomadics, Inc. applied their patented sensor technology, based on the PC Card (formerly PCMCIA) architecture, in the development of instruments to meet the Air Force's environmental monitoring requirements. Nomadics' concept allows development of laboratory quality instruments in a credit card-sized device that plugs into the PCMCIA slot of a portable computer. This approach converts a commercial laptop computer into a powerful platform capable of collecting, storing, and manipulating field data via common software programs.

Payoff

Nomadics worked with the Air Force to define and develop a suite of electrochemical sensors. The products included sensors for pH, dissolved oxygen, conductivity, ion concentration, and other indicators of water quality. Sensors were also designed as detectors for specific chemical contaminants such as volatile organic compounds (VOCs).

Technology Transfer/ Commercialization

Nomadics licensed the technology to other companies that now market the product internationally. Nomadics used the experience in developing PC Card instruments to design other applications, including a field spectrometer and several temperature measurement devices. These products have also been licensed to other companies for sales and distribution. Nomadics' PC Card instruments have contributed significantly to the company's revenues and capabilities and have created opportunities for other product development efforts. Nomadics won the Small Business Administration 1999 SBIR Tibbetts Award for "Excellence in Product Development."

SBIR Partner:

Nomadics, Inc.
Stillwater, OK

Employees:

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"The technologies being developed are important to the Air Expeditionary Force requirements for protection of our personnel from toxic industrial materials, explosive devices, and chemical/ biological agents."

Bruce Nielsen
AFRL Air Expeditionary Force Technologies Division

Air Force SBIR Update

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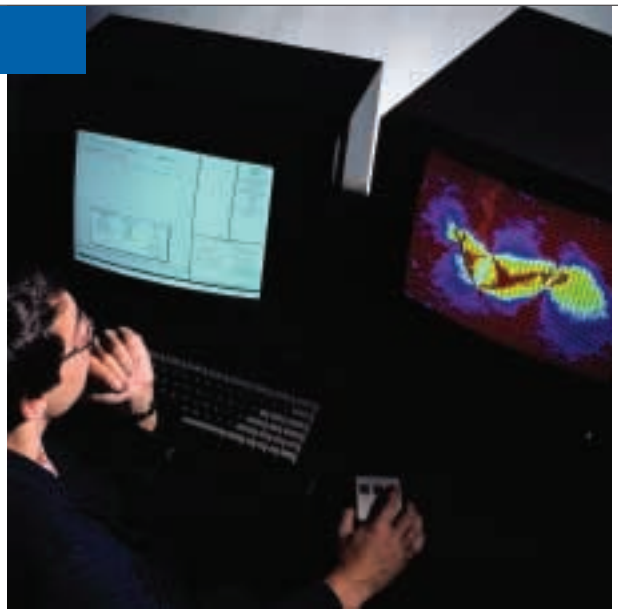
Proposal Evaluation Step

Once the Air Force receives the proposals and logs them into the proposal tracking system, the local SBIR office prepares evaluation packages for the technical team to evaluate. We encourage the Technical POCs to convene an evaluation team of at least three individuals for each topic (normally, at least one member will be from the topic authoring or sponsoring Air Force office).

The evaluation team reviews and scores each proposal in three areas: technical approach; qualifications of the principal/key investigator(s), staff, and consultants; and commercialization potential. These areas are listed in descending order of importance for Phase I awards.



Contract Award

Once the Air Force completes the evaluation of all the proposals, the proposals are rank ordered based upon their relative scores within each topic. Assuming the highest evaluation score exceeds a minimum acceptable score, the Air Force may award a contract to the company with the highest score, subject to availability of funding and other factors. On occasion, the Air Force may award multiple awards against a single topic. Historically, the Air Force has averaged 1.4 awards for every published topic. Approximately 50% of those Phase I contract awards have gone on to receive a Phase II contract award.

SBIR Award Winners

Each year the SBIR Program presents its prestigious Tibbetts Award to individuals, projects, organizations and small businesses judged to exemplify the very best in SBIR achievement.

The Air Force fared well in the 2000 awards presentations. Donald Snyder III, an SBIR project officer from AFRL's Munitions Directorate at Eglin AFB, was awarded a Tibbetts Award for his extraordinary service to the program.

Air Force SBIR sponsored Small Businesses winning Tibbetts awards included

- Assembly Guidance Systems, Chelmsford, MA
- TACAN Corporation, Carlsbad, CA
- Metal Tech Industries, Inc., Iowa Falls, IA
- Zybron, Inc., Beavercreek, OH

Congratulations to all!

Roland Tibbets (left), award namesake and father of the SBIR Program, presents Don Snyder III with 2000 Tibbets Award.

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Air Force SBIR Program
AFRL/XPTT
1864 4th Street, Suite 1, Bldg. 15
Wright-Patterson AFB OH 45433

Program Manager: Stephen Guilfoos
Website: www.afrl.af.mil/sbir/index.htm

DSN: 986-9062
Comm: (800) 222-0336 or
(937) 656-9062
Fax: (937) 255-2329
e-mail: steve.guilfoos@afrl.af.mil

The goal of the Air Force SBIR Program is to serve the technology needs of Air Force warfighters. It accomplishes its mission as part of the Air Force Research Laboratory's (AFRL) integrated research and development (R&D) team. AFRL's mission is leading the discovery, development, and integration of affordable warfighting technologies for our aerospace forces.

SBIR Advantage is published quarterly by the Air Force SBIR Program office. This publication offers an overview of AF SBIR issues and information. The purpose of *SBIR Advantage* is to provide Air Force, DoD, and other government leadership with additional insight into the vital contributions made by the SBIR program to Air Force R&D.

SBIR Advantage is available online at: www.afrl.af.mil/sbir/index.htm